

As shown in FIGS. 1 to 3, a transparent box-shaped housing 2 having an opening door 1 on one side thereof is provided with a cylindrical funnel-receiving member 4 fixedly mounted on a ceiling portion 3 thereof. A funnel (rainfall receiver) 5 having a diameter of 8 cm placed on the cylindrical funnel-receiving member 4, and a pointed end portion of the funnel 5 passes through a funnel hole 6 formed in the ceiling portion 3 so that an outlet port 7 may downwardly face an upper portion within the housing 2. A tumbler 13 consisting of a pair of disks 12, 12 revolvably supported by a pair of support members (support plates) 11, 11 standing on a bed plate 8, which can be taken out of the housing 2. The tumbler 13 resides in a vertical plane and is housed in the housing 2. Eight sets of cylindrical bottomed sampling containers 15 are swingably and detachably provided between both disks 12, 12 on the same circumference at regular intervals, and one disk 12 provided with a cylindrical weight fixedly projecting outward on an outer side thereof.

With such a construction, in a first stage, as shown in FIG. 1, a first sampling container 15 (1) corresponds to a position immediately under the outlet port 7 of the funnel 5 and a weight 16 is engaged with one side of one support plate 11 with a support shaft 14 of both disks 12, 12 put between the weight 16 and the sampling container 15 (1). Although the weight 16 serves also as a first stage position-determining mechanism in the first stage in this preferred embodiment, a first stage position-determining stopper may be provided separately from the weight 16. When it likely to rain, if the funnel 5 is equipped with a removable cover 21, the rainfall is collected by the funnel 5 when it rains, and, the rainfall is first poured into the first sampling container 15 (1) drop by drop through the outlet port 7. When the rainfall is sampled in the first sampling container 15 (1) and a moment of rotation by the rainfall sampled in the first sampling container 15 (1) becomes larger than that acting upon the support plate 11 from the weight 16, a balance in weight between the weight 16 and the rainfall sampled in the first sampling container 15 (1) is changed to start a revolution of the disks 12, 12 in the direction shown by an arrow 24 in FIG. 4 (counterclockwise direction in FIG. 1). When the rainfall is gradually accumulated in the first sampling container 15 (1) to gradually descend the sampling container 15 (1), a second sampling container 15 (1) corresponds to the outlet port 7 of the funnel 5 to start a sampling of rainfall similarly. During that time, the weight 15 is separated from one end of the support plate 11 to be raised while forming a balanced condition between it and the rainfall sampled momentarily. When an appointed quantity of rainfall is sampled in the second sampling container 15 (2), a third sampling container 15 (3) corresponds to the outlet port 7. Subsequently, an almost equal quantity of rainfall is sampled in the third sampling container 15 (3) and the following sampling containers 15 until a seventh sampling container 15 (7) is in turn, similarly positioned. In addition, the first sampling container 15 (1) does not move during an initial short time when the weight 16 is engaged with the support plate 11, as above described, so that there is a tendency that the quantity of rainfall sampled in the first sampling container 15 (1) is larger than that sampled in the second to seventh sampling containers, respectively, but this tendency can be reduced by for example regulating a position of a bed

plate 8 or adding to the weight to regulate the first sampling container 15 (1) in weight.

When the appointed quantity of rainfall is sampled in the seventh sampling container 15 (7) and the following eighth sampling container 15 (8) corresponds to the outlet port 7 of the funnel 5, the weight 16 is engaged with the other side of the support plate 11 to stop the disks 12, 12. At this time, the eighth sampling container 15 (8) is arranged immediately below the outlet port 7 and a pointed end of an exhaust pipe 23 sticks out from the eighth sampling container 15 (8) so that it faces one end of a pipe 18 for introducing the rainfall into an overflow container 17 on the bed plate 8 (refer to FIG. 6). Thus, when the quantity of rainfall sampled in the eighth sampling container 15 (8) exceeds the appointed value, the rainfall is overflows to be collected in a beaker 17 on the bed plate 8, whereby the whole residual rainfall can be sampled separately from the first stage rainfall. In addition, although the weight 16 serves also as a stop for determining a position where the revolution is completed in this preferred embodiment, the stop for determining the position where the revolution is completed may be provided separately from the weight 16.

As above described, an almost equal quantity of rainfall can be sampled in a separate step by step procedure in the first to seventh sampling containers 15, respectively. If the sampling operation is over, the disks 12, 12 are taken out of tile housing 2 together with the bed plate 8 and the respective sampling containers 15 are removed from the disks 12, 12 so as to be used for other uses such as measurements of pH-value and electric conductivity. In addition, the sampling containers 15 are simple in construction, so that they are easily washed.

Such the sampler can be formed lightweight and compact by using transparent acrylic resins and the like for almost all main members, so that it can be easily installed wherever desired and handled even by a beginner. Furthermore, it can be inexpensively provided, so that it is expected that it can be used in many fields.

In a more detailed description, a pair of disks 12, 12 are integrally engaged with each other at a central portion 20 thereof (refer to FIG. 3) and a metallic support shaft 14 fixedly passes through the central portion 20 so to pivot on resinous bearing members 22, 22 called a roulon put on upper portions of the support plates 11, 11 standing on the bed plate 8 with a reduced friction factor, whereby a subtle balanced condition can be formed. However, such a consideration is not always specifically required in the case where the whole weight is reduced by for example using merely one disk 12, as disclosed in a preferred embodiment which will be mentioned later.

The sampling containers 15 for sampling the rainfall are in the form of bottomed cylinder simple in construction and are hung down between both disks 12, 12 so as to be swingable within a plane parallel to both disks 12, 12 and detachable by engaging a circumferential projected member 25 formed on an upper outer circumference thereof with a circular receiving member 26 pivoted between both disks 12, 12 (refer to FIG. 4). In short, the sampling containers 15 can be put on the receiving member 26 from the upper part to be simply installed and always held in an almost vertical posture under the condition that they are hung down by means of the receiving member 26 (refer to FIG. 3). Accordingly, when the sampling containers 15 are to be re-